



**Figure 1.** A – Earthquakes with magnitudes equal to or larger than 3.5 (black) and 5.5 (red) and depths shallower than 40 km for the period 1967 through 2007. Hypocentral information is from the U.S. Geological Survey National Earthquake Information Center files. B – Plate boundaries and geometries employed for MORVEL. Plate name abbreviations are as follows: AM – Amur ; AN – Antarctic ; AR – Arabia ; AU – Australia ; AZ – Azores ; BE – Bering ; CA – Caribbean ; CO – Cocos ; CP – Capricorn ; CR – Caroline ; EU – Eurasia ; IN – India ; JF – Juan de Fuca ; LW – Lwandle ; MQ – Macquarie ; NA – North America ; NB – Nubia ; NZ – Nazca ; OK – Okhotsk ; PA – Pacific ; PS – Philippine Sea ; RI – Rivera ; SA – South America ; SC – Scotia ; SM – Somalia ; SR – Sur ; SU – Sundaland ; SW – Sandwich ; YZ – Yangtze. Blue labels indicate plates whose motions are not estimated in this study. Patterned red areas show diffuse plate boundaries.